

## REMARKS

The only issues outstanding in the Office Action mailed January 27, 2004, are solely the rejection under 35 U.S.C §103 and the double patenting rejection. Reconsideration of these issues, in view of the following discussion, is respectfully requested. At the outset, it is believed that the prior rejection under 35 U.S.C §102 has been withdrawn.

### Rejection Under 35 U.S.C §103

Claims 1 and 6-12 (all claims pending) have been rejected under 35 U.S.C §103 over WO '260 taken with Takahashi and Mizuide. Reconsideration of this rejection is respectfully requested.

The Office Action relies on WO'260, commonly assigned with the present application, for the background disclosure of a fluorinated primer, used to attach a fluoropolymer to a metal. As admitted at page 3 of the Office Action, WO '260 fails to teach that the fluoro primer is a PVDF homopolymer or a VF<sub>2</sub>/HFP copolymer *chemically modified by a partial dehydrofluorination treatment followed by oxidation*. In order to supply this missing link, the Office Action must rely on *both* Takahashi and Mizuide. It is respectfully submitted that this combination as set forth in the Office Action constitutes hindsight.

First, the Office Action must argue that it is obvious to substitute the "fluorinated resin" of the WO with the vinylidene fluoride copolymer of Takahashi. However, such a substitution would absolutely not be made by one of ordinary skill in the art. One reason for this is that it is not a simple matter of substituting "layer L2", the fluoro primer in WO with the material of the secondary reference. The "layer L2" mentioned at page 3 of the Office Action is, in actuality, the entirety of the invention in the WO. The WO states that the objective therein is a method for improving the adhesion of fluorinated resins to metal materials, and teaches that doing so requires a fluorinated resin composition with at least two of three components, a PVDF resin, an acrylic or methacrylic polymer having functional groups, and a vinylidene fluoride copolymer resin. See the Abstract at page 2, lines 1-7. The Office Action fails to explain *why* one of ordinary skill in the art would be motivated to replace the *entirety* of the resin composition in the

WO with the adhesive of Takahashi. While true that Takahashi argues that that it's resin possesses excellent adhesion, so does the WO. Moreover, again, it is not a simple matter of replacing an insignificant component of the WO, but stripping the invention entirely and replacing with that of a different patent. To do so would be like substituting white library paste for cyanoacrylate glue, simply because both labels indicate that they may be used to adhere cardboard. There is simply not an adequate explanation of why one of ordinary skill in the art would make such a wholesale substitution.

Moreover, even if it were argued that one of ordinary skill in the art might possess motivation to modify the vinylidene fluoride component of WO by employing the copolymer of Takahashi, it is submitted that one of ordinary skill in the art would not do so. First, the material of the WO is a complex two or three component resin. By contrast, Takahashi discloses only a one-component resin, a vinylidene fluoride copolymer. Even to the extent that a vinylidene fluoride copolymer is employed as one of the components in the WO, one of ordinary skill in the art cannot predict, with reasonable certainty, whether modifying this component of the WO resin by introducing carboxyl groups as in Takahashi would improve adhesion, or render the WO resin unsuitable for its intended use, e.g., due to unwanted interactions with the other component(s). Simply because adhesion of a one-component resin can be approved by a particular treatment, does not enable one of ordinary skill in the art to predict that an equivalent beneficial effect might be achieved in a more complex multi component resin composition.

In addition, *even if* one of ordinary skill in the art were, for some unknown reason, to decide to substitute the resin of Takahashi, et al. for the vinylidene fluoride component of the WO, such a substitution would *not* result in the presently claimed fluoro primer. This is because Takahashi discloses that their invention involves copolymerization of a vinylidene fluoride-based monomer with an unsaturated dibasic acid monoester or a vinylidene carbonate. See column 4, lines 1-3. Thus, Patentees produce a carbonyl group or a carbonate group, as a result of treating the polymer backbone which is a dibasic acid monoester or vinylidene carbonate. The product thus obtained through copolymerization therefore contains two different carboxy functions: an ester function and an acid function. A dehydrofluorination/oxidation reaction, as recited to produce the presently claimed product, cannot lead to both such functions in a similar way. As a

result, even if one of ordinary skill in the art were to make this substitution, the product presently claimed would not be produced.

However, it is apparently argued in the Office Action that Mizuide teaches that a dehydrofluorination/oxidation reaction must be used to produce the resin on Takahashi. This is incorrect. First, as discussed in the previous paragraph, a carboxyl group containing fluoropolymer comparable to the present claims is not produced in Takahashi. Moreover, Mizuide teaches production of a carboxyl group containing fluoropolymer with a carboxyl group at both ends. It is not explained, and not seen, why such would be equivalent to the material of Takahashi. Mizuide conducts its reaction after dissolution of the polymer, where as the material of Takahashi is produced preferably by suspension polymerization or emulsion polymerization, see column 4, lines 5-10. Thus, it is unclear to one of ordinary skill in the art whether the technique of Mizuide would even work on such materials. In any event, one of ordinary skill in the art is *not* taught that the materials of Takahashi are necessarily produced by the reaction of Mizuide.

In short, it is simply not seen that the product obtained by copolymerization of vinylidene difluoride and the dibasic acid monoester of Takahashi is equivalent to the oxidized fluorinated polymer of Mizuide. Thus, use of dehydrofluorination and oxidation is *not* clearly how Takashi's materials are produced, nor would the use of such a process be obvious, *even if* it were obvious to substitute the material of Takahashi for that in the WO (it is not).

As a result, it is respectfully maintained that it simply would not be obvious to one of ordinary skill in the art to produce the three-layer composition of present claim 1, wherein the fluoro primer has the characteristics of one produced as stated. Withdrawal of the rejection under 35 U.S.C §103 is thereby respectfully requested.

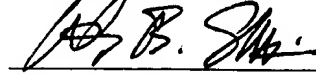
#### Double Patenting Rejection

Inasmuch as the double patenting rejection is made over a published application, it is submitted that it is premature to address this rejection until such time as allowable subject matter is indicated either herein or in the copending application. Applicants will take appropriate action at that time.

The claims of the application are submitted to be in condition for allowance. However, should the Examiner has any questions or comments, he is cordially invited to telephone the undersigned at the number below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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